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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/703,162	10/31/2000	Benjamin M. Cahill III	INTL-0438-US-(P9450)	9745

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TROP PRUNER & HU, PC
8554 KATY FREEWAY
SUITE 100
HOUSTON, TX 77024

EXAMINER

ABDULSELAM, ABBAS I

ART UNIT	PAPER NUMBER
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2674

13

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/703,162

Applicant(s)

CAHILL, BENJAMIN M.

Examiner

Abbas I Abdulsalam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

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DETAILED ACTION

Response to Arguments

1. In view of the appeal filed 01/09/04 PROSECUTION IS HEREBY REOPENED as set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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Claims 1, 10-11, 13-14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung et al. (USPN 6538656) in view of Callahan et al. (USPN 6396473).

Regarding claims 1 and 17, Cheung et al. (hereinafter "Cheung") teaches a process for blending graphics and video surfaces (Fig. 28), and the process includes a video compositor, which blends the pass through video and the background color with a scaled video window using the alpha value. Cheung teaches that that by using the alpha value, a graphic output is pre-blended in the graphics blender (step 904) and filtered in step (906) such that the blended graphics contain the correct alpha values, in order that the final blended result would be produced. See col. 45, lines 5-20 and Fig. 28. However, while Cheung teaches filtering and correction based on the alpha values, Cheung does not teach adjusting a flicker based on the alpha value. Callahan et al. (hereinafter "Callahan") on the other hand teaches video processing mechanism for blending (Fig. 2), the mechanism including a flicker filter (16) such that the blending is performed by the graphic processor (20) in accordance with alpha information stored in any suitable format. See col. 5, lines 50-65 and Fig. 2.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process for blending graphic and video surfaces (Fig. 28) to adapt Callahan's flicker filter (16). One would have been motivated in view of the suggestion in Callahan that incorporating the flicker filter (16) inside Cheung's blending process of Fig. 28 is functionally equivalent to "adjusting a flicker filter based on alpha value". The use of a flicker filter helps allocate memory to video graphics buffering as taught by Callahan.

Regarding claim 10, in addition to what has been discussed, Cheung teaches a graphic blender (140) blending a YUV 4:2:2 signals together, preferably one line at a time using alpha

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blending, to create a single line of graphics from all of the graphics windows on the current display line. See col. 11, lines 35-45 and Fig. 5. Callahan teaches that the flicker filter (16) could be related to any suitable software (col. 9, lines 3-9). It would have been obvious to utilize Callahan's blending system (Fig. 2) along with appropriate software to achieve the desired "software program".

Regarding claim 11, Callahan teaches the use of a flicker filter (16), and flicker may be filtered from the edges of the graphics via hardware, firmware or software or any suitable combination filter (16). See col. 9, lines 3-9. It would have been obvious to utilize the flicker filter in the desired fashion.

Regarding claim 13, Cheung teaches as shown in Fig. 4 video and graphics display pipelines.

Regarding claim 14, Cheung teaches that each data structure includes a field indicating the alpha value for the graphics in the surface and a location of the logical surface on the display. See col. 13, lines 26-32.

Claims 2-9, 12, 15-16 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung et al. (USPN 6538656) in view of Callahan et al. (USPN 6396473) and in further view of Young et al. (USPN 6144365).

Regarding claims 2-4, 8-9, 18-20 and 22, Cheung as modified has been discussed above. However, Cheung does not teach comparing the alpha value to a predetermined threshold value, subtracting the alpha value from a threshold value and performing division with respect to alpha value. Young on the other hand teaches the alpha test unit (306) which compares the alpha value

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of a pixel to a threshold and outputs the result to “Z compare unit” which in turn transfers its own output to alpha blending unit (310). See Fig. 3. Young further teaches details of alpha blending unit (310) to include adder, subtract or, multiplier and divider (430, 422, 428 426) as shown. See Fig. 4.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Cheung’s video and graphic system to adapt Young’s alpha test unit (306) as configured in Fig. 3 and alpha blending unit (310) as detailed in Fig. 4. One would have been motivated in view of the suggestion in Young that the alpha test unit (306) along with Z compute unit (308) coupled with alpha blending unit (310) equivalently provide the desired comparison, subtraction and division of alpha value with respect to threshold value. The use of alpha test unit (306) and blending unit (310) helps a system of computer graphics and image processing as taught by Young.

Regarding claims 5, 7, 15 and 21, Callahan teaches that the flicker filter (16) being eliminated when a flicker is not a problem as indicated by dashed arrow (17) (col. 9, lines 8-9 and Fig. 5). Young as mentioned above teaches alpha test unit (306) comparing the alpha value of a pixel with respect to a threshold value. It would have been obvious to utilize feature from Callahan and Young inside Cheung’s video and graphic system.

Regarding claims 6, 12 and 16, Callahan teaches the use of a flicker filter (16), and flicker may be filtered from the edges of the graphics via hardware, firmware or software or any suitable combination filter (16). See col. 9, lines 3-9. It would have been obvious to utilize the flicker filter in the desired fashion. Young as mentioned above teaches alpha test unit (306)

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comparing the alpha value of a pixel with respect to a threshold value. It would have been obvious to utilize feature from Callahan and Young inside Cheung's video and graphic system.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following art is cited for further reference.

U.S. pat. No. 6,320,619 to Jiang

5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abdulsalam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand delivered responses should be brought to Crystal Park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.

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Abbas Abdulsalam

Examiner

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April 1, 2004


XIAO WU
PRIMARY EXAMINER